

ABSTRACT OF THE DISCLOSURE

A dynamic structural panel having one or more compliant dimple layers connected together by one or more reinforcing layers engaging ends of dimples on the dimple layer to create a cavity between the layers. The dimples are spaced apart from one another to form a dimple layer region. The dimple layer region may be either curved relative to the dimples or corrugated, thereby providing compliancy for the dynamic structural panel. The connection of the dimple layer and reinforcing layers creates an integral structural panel that can be planar by having identical heights of the dimples on the dimple layer to create a planar panel (flat) or nonplanar (curved) by varying the heights of the dimples on the dimple layer or through planar spacing adjustment. The panel can be modified in various ways such as by choice of materials and/or geometries of the various layers and/or incorporation of additional structural features.